Amendments to the Claims

1 – 11 (canceled)

12.   (currently amended) A method for performing data transmission via a subscriber's connection in an Ethernet communication network, the method comprising:

defining a connection data, wherein the connection data includes a port identification that uniquely identifies a subscriber's connecting line corresponding to the subscriber's connection;

defining a subscriber data including a user name and a password, wherein the connection data and the subscriber data in combination uniquely identify the subscriber's connection;

transmitting the connection data and the subscriber data via the subscriber's connection in accordance with a predefined protocol for the Ethernet communication network comprising at least a discovery stage link establishment stage to establish a session based on data supplied in one or more discovery messages;

inserting the connection data and the subscriber data as respective tags in into said one or more discovery messages;

transmitting said one or more discovery messages to the communication network via the subscriber's connection; and

authenticating a session via the subscriber's connection by using the combination of the connection data and the subscriber data contained in said one or more discovery messages, wherein the session is established upon a joint verification of the connection data and the subscriber data which in combination identify the subscriber's connection, said joint verification of the connection data and the subscriber data enhancing a likelihood of accurately authenticating the session through the subscriber's connection.

13.   (canceled)

14.   (previously presented) The method as claimed in claim 12, wherein the connection data is stored in the communication network.

15.   (canceled)

16.   (previously presented) The method as claimed in claim 12,

wherein the subscriber's connection is allocated to a switching device located in the communication network,

wherein the connection data and the subscriber data are inserted into said one or more discovery messages through the switching device,

wherein said one or more discovery messages which contain the connection data and the subscriber data are transmitted to an access network element located in the communication network,

wherein the respective tags which represent the connection data and the subscriber data contained in the messages is extracted in the access network element, and

wherein the extracted connection data and the subscriber data are transmitted from the access network element to an authentication network element located in the communication network where the joint verification of the connection data and the subscriber data is performed.

17-24.   (canceled)

25.   (currently amended) A communication device for a communication system for
performing data transmission via a subscriber's connection in an Ethernet communication
network, comprising:

a connection data including a port identification that uniquely identifies a subscriber's
connecting line corresponding to the subscriber's connection;

a subscriber data including a user name and a password, wherein the connection data and
the subscriber data constitutes a combination of data that uniquely identifies the subscriber's
connection;

a transmitter that is allocated to the communication device and transmits the connection
data and the subscriber data to the communication network; and

an authenticator located in the communication network that verifies authenticity of a
session via the subscriber's connecting line by using the connection data and the subscriber
data,

wherein the connection data and the subscriber data is transmitted via the subscriber's
connection in accordance with a predefined protocol for the Ethernet communication network
comprising at least a discovery stage link establishment stage to establish a session based on
data supplied in one or more discovery messages transmitted via the subscriber's connection to
the communication network ,

wherein the connection data and the subscriber data are inserted as respective tags into
said one or more discovery messages,

wherein the authenticator is configured to authenticate a session via the subscriber's
connection by using the combination of the connection data and the subscriber data contained
in said one or more discovery messages, wherein the session is established upon a joint
verification of the connection data and the subscriber data which in combination identify the
subscriber's connection, said joint verification of the connection data and the subscriber data
enhancing a likelihood of accurately authenticating the session through the subscriber's
connection.

26.   (previously presented) The communication device as claimed in claim 25, wherein the subscriber's connecting line is a wire connecting line through which the subscriber is physically connected to the communication network.

27.   (new) The communication device as claimed in claim 25, wherein the subscriber's connection and the transmitter are allocated to a switching device located in the communication network.

28. (new) A method for performing a data transmission of a client terminal connected to a lower-ranking communications network connected to a given one of a plurality of ports on a switching device in a higher-ranking communications network, the method comprising:

the client terminal transmitting a discovery message to a network access router connected to the switching device in the higher-ranking network, thus initiating a communication link between the client terminal and the network access router, wherein the network access router acts as a server for the communication link;

the switching device identifying the discovery message transmitted in the direction of the network access router;

the switching device identifying the given port on the switching device that receives the discovery message;

the switching device inserting an identification of the given port into a tag field of the discovery message;

the switching device transmitting the discovery message with the port identification to the network access router;

the network access router terminating the communication link, and forwarding the port identification and a user identifier and a password of the client terminal to an authentication server;

the authentication server comparing the port identification with the username and password; and

after a successful authentication, the network access router establishing a useful data connection between the client terminal and the higher-ranking network.

29. (new) The method of claim 28, wherein the port identification and the user identifier and the password are inserted as respective tags into said discovery message.

30. (new) The method of claim 29, wherein the communication link is a point-to-point data connection.

31.   (new) The method of claim 30, wherein the lower-ranking network is an Ethernet local area network, and the higher ranking network is the Internet.